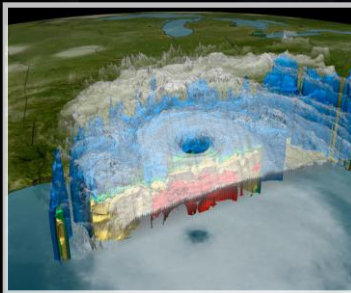
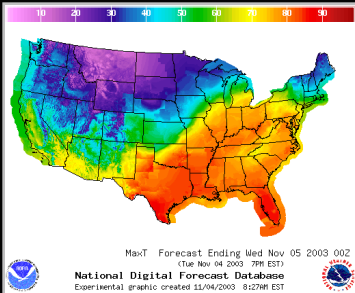
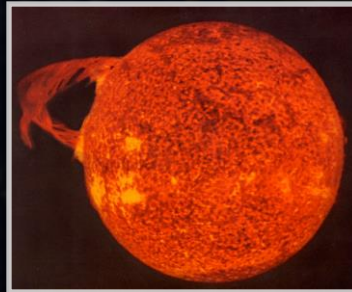
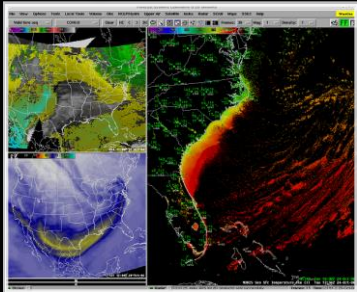


The National Weather Service: Agency Update



Dr. William M. Lapenta

Director, National Centers for Environmental Prediction

NOAA/National Weather Service

Space Weather Workshop

15 April 2015



NWS Strategic Outcome: A Weather-Ready Nation

Becoming a Weather-Ready Nation is about building **community resiliency** in the face of increasing vulnerability to extreme weather

“Ready, Responsive, Resilient”

REQUIRES NWS TO:

- Fully Integrate our Field Structure:
 - Better Forecasts and Warnings
 - Ensure Consistent Products and Services
- Provide Impact-based Decision Support Services (IDSS)
- Deliver through Multiple and Reliable Dissemination Pathways
- Work with Partners to *gain needed response*; includes embedding NWS in Emergency Operations Centers



*We now have
Over 1200 WRN Ambassadors*

*Involves entire US Weather Enterprise WORKING TOGETHER
to achieve far-reaching national preparedness for weather events*



NWS Programs, Projects, Activities (PPAs) and Budget Structure

AOP process allows for more transparency in budget process

Observations

- A focused effort on sustaining & integrating all observations supporting the NWS mission and ensuring continuous situational awareness.

Central Processing

- Fully integrating the central and distributed computing system from central computer to AWIPS/AHPS

AFS

- Working toward “fully integrated field structure” providing consistent products & services
- Supports local/national IDSS, education outreach, & social science (*nature of work will change*)

Dissemination

- Better managed, reliable, centralized, and more responsive, especially during high impact events.

STI

- Supports forecaster training/development
- Provides a centralized development environment to enable Research to Operations (R2O) & a visible “catcher’s mitt” for the rest of the research community interested in the R2O process (e.g., CSTAR, SOO/DOH ...)

Facilities

- Make sustaining all of the NWS facilities a fundamental part of the NWS mission execution

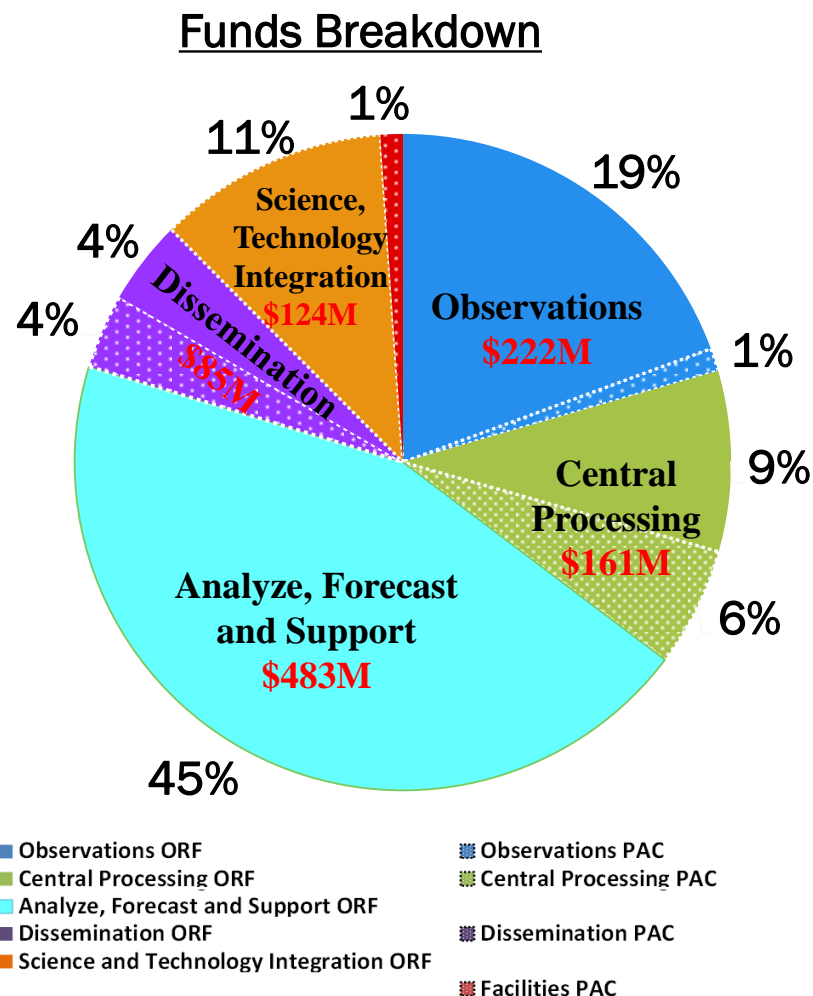


NWS Budget Composition by Portfolio

Consolidated and Further Continuing Appropriations Act, 2015

PPA	Funds*	Full Time Employees (FTE)
Observations ORF	210,777	804
Observations PAC	12,300	-
Central Processing ORF	96,617	232
Central Processing PAC	64,000	22
Analyze, Forecast and Support ORF	483,060	3,058
Dissemination ORF	40,099	82
Dissemination PAC	45,000	-
Science and Technology Integration ORF	123,600	517
Facilities PAC	12,000	-
TOTAL	1,087,453	4,715

* In thousands of dollars





New Challenge

Evolving How We Measure Success

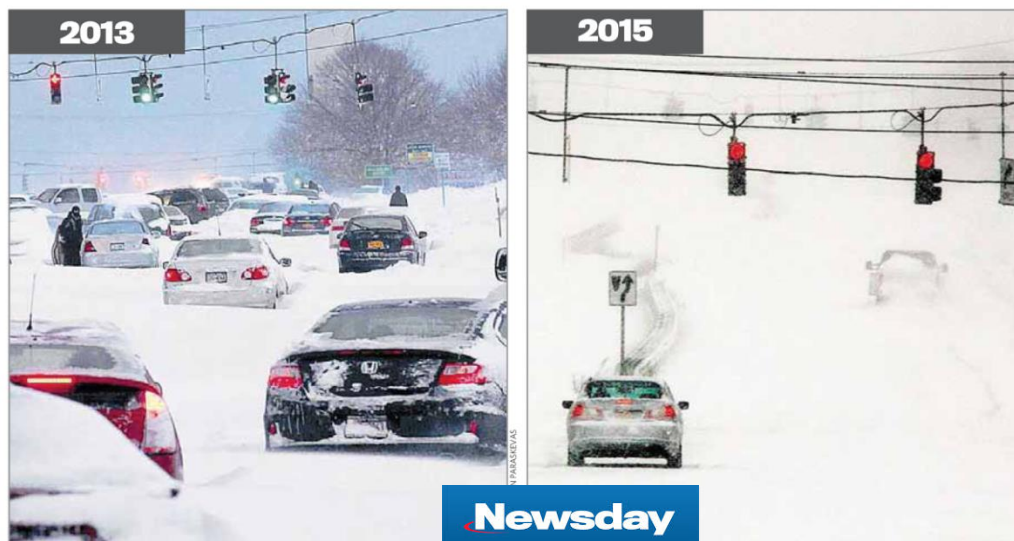
Moving Beyond Traditional Forecast Metrics To Assess Socioeconomic Impacts

The NWS forecast is just that, a “forecast”, and we need to be prepared to respond to incidents based on the best available information. The most important aspect of this event is that people responded, and lives were saved. Although some areas didn’t receive the forecast impacts, there are other areas in southern New England that felt the brunt of this nor’easter.

- **Craig Fugate, FEMA Administrator**

Joe Esposito @JoeEspoNYC · 19h
.[@NWSNewYorkNY](#) Thanks for your hard work w/ a difficult forecast. Only missed us by inches on a map. We prepped for the worst. Glad we did.

STRANDED IN 2013, SAFE IN 2015



ROUTE 347, LAKE GROVE: Two years ago, a major storm left drivers stranded for hours on this and other roads. But for this week’s storm, Gov. Andrew M. Cuomo imposed a travel ban at 11 p.m. Monday throughout Long Island, and the roads remained clear.

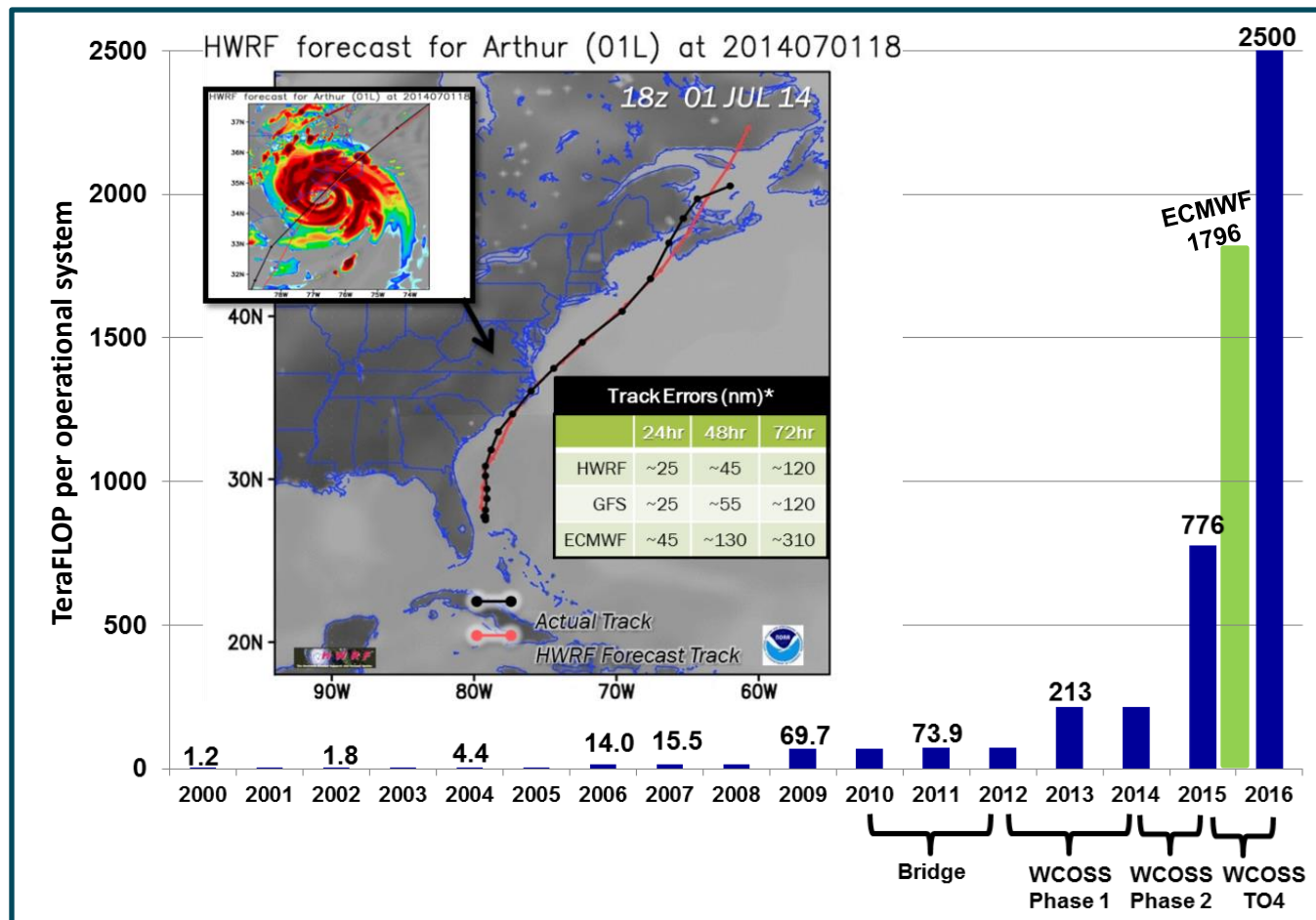


Current Status of Supercomputer

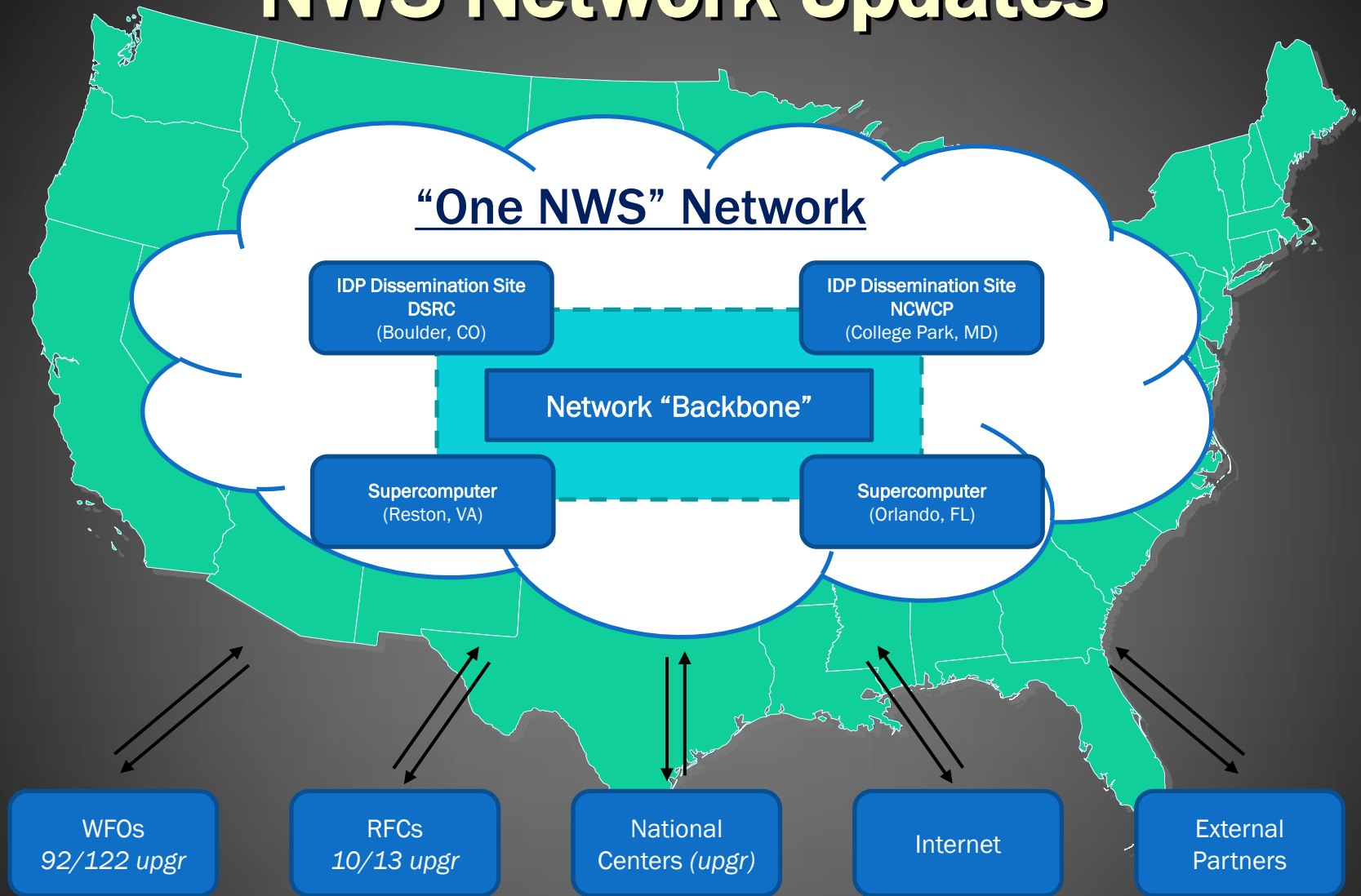
Goal: Increase HPC capacity from 776teraFLOPs in January 2015 to 2.5petaFLOPs (for primary and backup, respectively – for a total of 5 PF) by the end of CY 2015.

Key Milestones:

- May 2014: 3km HWRF (Hurricane-Weather Research & Forecasting) model upgraded – best hurricane model in the world.
- Sept 2014: High-Resolution Rapid Refresh (HRRR) operational – 3km every hr.
- Jan 2015: Global Forecast System (GFS) upgraded – 13km out to 10d.
- Upcoming Model Upgrades:
 - HWRF
 - SREF
 - GEFS
 - DA/GFS/4D ENKF
 - HRRR (HRRRe)



NWS Network Updates



The future One-NWS network will consolidate all operational networks (OPSnet, Regional, etc.) under a single managed network.

WFO Detroit: Upgraded in February 2014 (7x increase)



WRN Ambassador Initiative

Goal

Goal: Collectively engage with external organizations that are committed to creating societal response that is equal to weather, water, and climate risks.

✔ Data Providers (*i.e.*, Weather Enterprise)

- ✔ Maximize value of weather, water, and climate information to society
- ✔ Mutually benefit NOAA and other government agencies, academia, non-profits, and private sector

✔ Data Users (Decision-Makers)

- ✔ Meet “life and property” mission more effectively
- ✔ Strengthen business competitiveness

✔ Data Communicators (Media)

- ✔ Build consistency in message
- ✔ Increase outreach



U.S. Commerce Dept. @... 1d
.**@NOAA** encourages U.S. biz
to be Weather-Ready Nation
Ambassadors during National
Severe #Weather
Preparedness Week
[1.usa.gov/1drU7mN](https://www.usa.gov/1drU7mN)

Visit: www.noaa.gov/wrn



WRN Ambassador Initiative

Benefits to WRN Ambassadors

- Become part of a unified effort that will increase consistency in messaging
- Take partial ownership of the WRN storyboard or call-to-action
- Highlight their contributions
- Interact with NOAA in easier ways on data access, data formats, and new products/services
- Foster innovative opportunities with NOAA and other WRN Ambassadors
- Receive email notifications of events, safety campaigns, feedback opportunities

VAISALA www.vaisala.com

Building Weather Ready Nations

Trusted Data
Trusted Forecasts
Be Ready,
Resilient,
and Responsive

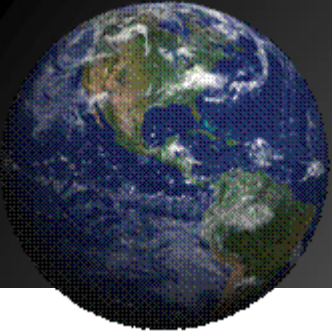
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WRN Ambassadors!

Established partners...



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NORTHROP GRUMMAN



UNISYS



FARMERS



FEMA

Global Security Systems

NCAR | University Corporation
UCAR | for Atmospheric Research



National Weather Service



Making Connections

Connecting Prediction Capabilities to Societal Need

- **Water**
 - How Much, How Little, Quality
 - HAB, Hypoxia, Vibrio
- **Agriculture**
 - Food Security
- **Energy Production**
- **Health**
 - Prediction of vectors for Malaria, Cholera, Dengue Fever

